

UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA

STRIKE 3 HOLDINGS, LLC,

Plaintiff,

v.

JOHN DOE subscriber assigned IP address
68.113.243.220,

Defendant.

Civil Case No. 0:24-cv-04298-PJS-DJF

**DECLARATION OF JORGE ARCO IN
SUPPORT OF PLAINTIFF'S MOTION
FOR LEAVE TO SERVE A THIRD-
PARTY SUBPOENA PRIOR TO A RULE
26(f) CONFERENCE**

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**DECLARATION OF JORGE ARCO IN SUPPORT OF PLAINTIFF'S MOTION FOR
LEAVE TO TAKE DISCOVERY PRIOR TO A RULE 26(f) CONFERENCE**

1. My name is Jorge Arco.

2. I am over the age of 18 and competent to make this declaration. The facts stated in this declaration are based upon my personal knowledge and, if called and sworn as a witness, I can and will competently testify to all matters contained herein.

Education and Career

3. From 2010 to 2012, I studied Systems and Network administration at I.E.S. TRIANA, located in Seville, Spain, where I received my certificate in higher education.

4. Since 2012, I have worked in the information technology industry.

5. During my time in this industry, I have worked as a software developer at various seniority levels including lead software developer, system administrator, lead system administrator, enterprise architect, cloud and security consultant, and software and systems instructor.

6. During my career, I have acquired significant skills in areas such as operating systems (UNIX/Linux), network design and administration, information security, databases, and software and systems architecture.

7. I have also contributed to several open-source projects and ecosystems, including Kubernetes and Traefik. My contributions have focused primarily on areas of observability, operating systems, distributed systems, and software design.

8. I am highly competent in various programming languages including Typescript, Javascript, PHP, Golang, and Python.

Strike 3 Holdings, LLC Background

9. I work for General Media Systems, LLC (“GMS”) the parent company for Strike 3 Holdings, LLC (“Strike 3”), a Delaware limited liability company located at 2140 S. Dupont Hwy,

Camden, Delaware. Strike 3 is owned entirely by GMS and has existed since 2015.

10. I have worked with GMS since 2016, initially under the title of Senior Developer.

11. In my role as Senior Developer, I worked primarily on the development of GMS's websites that distribute, among others, Strike 3's movies. In 2018, I was promoted to Lead Systems Administrator and reported directly to the CTO. As Lead Systems Administrator, I participated in the creation, implementation, and maintenance of the VXN Scan infrastructure.

12. In February 2021, I was promoted to the role of Enterprise Architect. In this role, my main duties have been to ensure that software architecture, systems, networking, and corporate applications are set up for success. In March 2022, I transitioned from an employee to a contractor under the same role. I continued to oversee the VXN Scan infrastructure and work with Strike 3's legal team to ensure that the VXN Scan is always running properly.

13. In 2024, after the retirement of our former CTO, I was assigned the additional duty of executing declarations describing the creation, operation, and maintenance of the VXN Scan infrastructure and components.

14. Strike 3 owns the intellectual property to the Blacked, Blacked Raw, MILFY, Slayed, Tushy, Tushy Raw, and Vixen adult brands ("Brands"), including the copyrights to each of the motion pictures distributed through the Brands and the trademarks to each of the Brand's names and logos.

15. Our company has approximately 15 million visitors to our websites per month and a loyal following.

16. Our company's philosophies are important.

17. We always strive to pay artists and models an amount above that being paid by other companies. Indeed, we are known for paying our performers the highest rates ever recorded in the

industry. Empowering the artists -- and especially the women we work with -- is at the core of our company's philosophy.

18. We focus on delivering to our subscribers and fans superior quality adult films and a wonderful customer experience available for a monthly subscription at a fair price. When Strike 3 first began offering this service, conventional wisdom held that it was destined to fail; that people would refuse to pay extra to support the production of high quality adult content they enjoy when lesser quality films are available for free. Now, we have a substantial and loyal customer base that recognizes the value of paying a fair price to support the artists that provide the works they enjoy.

19. We provide jobs for over 120 people worldwide. We provide good benefits including health care coverage and have an extremely positive company culture. Our employees include producers, production managers, video editors, marketing specialists, accountants, stylists, content managers, business intelligence, product managers, and a full team of highly skilled software developers, system administrators, and a quality assurance department.

20. Our movies are known for having some of the highest production budgets of any in the industry. We invest in and utilize state of the art cinematic equipment. And, as our subscriber base grows, we always seek to find ways to invest in value for our customers.

21. Because of this, we have a subscriber base that is one of the largest of any adult site in the world.

22. Our films are frequently the number one seller of adult DVDs in the United States.

23. Our content is licensed throughout the world, which includes most major cable networks.

24. Our success has not gone unnoticed. Indeed, we are very proud that our unique cinematic films have won many awards. Some of our more recent awards include:

- a. Best New Studio (XBIZ, 2024)

- b. Studio of the Year (XBIZ, 2022)
 - c. Best Cinematography (AVN, 2023; XBIZ, 2024)
 - d. Director of the Year / Best Director (AVN, 2020-2021, 2023-2024 ; XBIZ, 2024)
 - e. Best Editing (Influence: Vanna Bardot, Tushy / AVN 2024, XBIZ 2024)
 - f. Best Music (Influence: Vanna Bardot, Tushy / AVN 2024)
 - g. Best New Production Brand (AVN 2024)
 - h. Feature Movie of the Year (Influence: Vanna Bardot / XBIZ, 2024)
 - i. Mainstream Venture of the Year (AVN, 2021)
 - j. Best New Site (XBIZ, 2022)
 - k. Best Anthology Series of Channel (AVN, 2023)
 - l. Best Actress (Maitland Ward in Tushy / AVN, 2024)
 - m. Best Anthology Series (Club VXX / AVN, 2024)
 - n. Outstanding Comedy (Influence: Vanna Bardot, Tushy / AVN, 2024)
25. We also are routinely featured in mainstream media. Forbes,¹ The Daily Beast,² CBC

¹“How One Pornographer is Trying to Elevate Porn to Art,” *Forbes*, July 20, 2017 <https://www.forbes.com/sites/susannahbreslin/2017/07/20/pornographer-greg-lansky-interview/#2301d3ae6593>.

² “Meet the Man Making Porn Great Again,” *The Daily Beast*, February 18, 2017 <http://www.thedailybeast.com/meet-the-man-making-porn-great-again>.

Radio,³ Rolling Stone,⁴ AdAge,⁵ and Jezebel⁶ have all published substantial profiles on us. We have also been praised for creating “feminist, ethical porn”⁷ and supporting performers during the COVID-19 pandemic.⁸

26. We are proud of our impact on the industry. We have raised the bar in the industry, leading more adult studios to invest in better content and higher pay for performers. That is a testament to the entire team, the company we have built, and the movies we create.

27. Unfortunately, piracy is a major threat to our company. We can compete in the industry, but we cannot compete when our content is stolen.

28. We have discovered that when we put videos online for paid members to view, it is often less than a day before our movies are illegally available to be downloaded on torrent websites. We have attempted to identify the initial seeders of the pirated content. However, due to our significant customer base, it is virtually impossible to 100% identify the actual individual who initially distributes our content via the torrent network. We do regularly scan our records for people who appear to be abusing our service and take action to prevent further abuse.

29. The issue of pirated content is a significant one; the Global Innovation Policy Center

³ “Porn-o-nomics: How one director is making a fortune by defying conventional wisdom,” *CBC Radio*, February 24, 2017 <http://www.cbc.ca/radio/day6/episode-326-sanctuary-cities-la-la-land-vs-jazz-hollywood-in-china-porn-o-nomics-and-more-1.3994160/porn-o-nomics-how-one-director-is-making-a-fortune-by-defying-conventional-wisdom-1.3994167>.

⁴ “Versace, Champagne and Gold: Meet the Director Turning Porn Into High Art.” *RollingStone*, April 15, 2018 <https://www.rollingstone.com/culture/culture-features/versace-champagne-and-gold-meet-the-director-turning-porn-into-high-art-629908/>.

⁵ “Kanye West’s Favorite Pornographer is a Master of SFW Marketing,” *AdAge*, August 17, 2018 <https://adage.com/article/cmo-strategy/sfw-pornographer/314604>.

⁶ “The One Percent Fantasies of Greg Lansky’s Vixen” *Jezebel*, January 9, 2019 <https://jezebel.com/jerking-off-to-capitalism-the-1-percent-fantasies-of-g-1829976586>.

⁷ “What is Feminist Porn and Where to Watch,” *Elite Daily*, Jan. 26, 2022 <https://www.elitedaily.com/dating/what-is-feminist-porn-where-to-watch>.

⁸ “Porn Company Offers Performers Equipment to Safely Shoot Porn at Home,” *Vice*, April 7, 2020 <https://www.vice.com/en/article/xgg937/vixen-blacked-offers-equipment-shoot-porn-at-home>.

released a report⁹ in June 2019, and found that digital video piracy conservatively causes lost domestic revenues of at least \$29.2 billion and as much as \$71.0 billion. It also found that it results in losses to the U.S. economy of between 230,000 and 560,000 jobs and between \$47.5 billion and \$115.3 billion in reduced gross domestic product (GDP) each year. We certainly feel this pain, as do our paying customers, who are cheated out of access to even more films that our company does not have the resources to make when pirates freeload off the system instead of contributing their fair share to pay for the works they enjoy.

30. We put a tremendous amount of time, effort, and creative energy into producing and distributing valuable content for our paid customers. It crushes us to see it being made available for free in just minutes.

31. Our movies are typically among the most pirated adult films on major torrent websites.

32. On average we report over 70,000 infringements through Digital Millennium Copyright Act notices every month but it does virtually nothing to stop the rampant copyright infringement.

33. The most—if not the only—effective way to stop the piracy of our movies on BitTorrent networks is to file lawsuits like this one.

34. We are mindful of the nature of the works at issue in this litigation. Our goal is not to embarrass anyone or force anyone to settle unwillingly, especially anyone that is innocent. We are proud of the films we make. We do not want anyone to be humiliated by them.

35. Because of this, our company and our legal team strives to only file strong cases against extreme infringers. Each lawsuit seeks to stop only those infringers who engage not only in illegal downloading, but also in large scale unauthorized distribution of our content.

36. We also do not seek settlements unless initiated by the defendant or their counsel. We do

⁹ “IMPACTS OF DIGITAL VIDEO PIRACY ON THE U.S. ECONOMY” <https://www.theglobalipcenter.com/wp-content/uploads/2019/06/Digital-Video-Piracy.pdf>.

not send demand letters.

37. We are careful not to proceed with a case against a defendant unless we feel we have a strong case and a good faith basis for doing so. We will not pursue defendants that provide substantiated exculpatory evidence. Nor will we pursue defendants that have proven hardships. Our clear objective is to be mindful and reasonable with each case.

38. We are a respected entertainment company that makes nearly all of its revenue from sales of subscriptions, DVDs, and licenses. Our goal is to deter piracy and redirect the infringement back into legitimate sales. Proceeds we receive from settlements go back into making our company whole.

39. We believe a consumer's choice of what content to enjoy, whether it be adult entertainment or otherwise, is a personal one to that consumer. Therefore, it is our policy to keep confidential the identity of not only our subscribers, but even those we are pursuing for copyright infringement. We typically only reveal a defendant's identity if the defendant does not contact Strike 3 to participate in the request to the Court to permit them to proceed anonymously, or if the Court in a particular action does not allow a defendant to proceed anonymously.

40. Our copyrights are the foundation of our livelihood. Our copyrights enable us to open our office doors each day, pay employees and suppliers, make a difference in our community, and create motion pictures that raise the industry standard. We have to protect them.

Strike 3 Holdings, LLC's Infringement Detection System

41. Under the supervision of the previous CTO, I was part of a team that developed the infringement detection system VXN Scan ("VNX"). In 2018, as Lead System Administrator, my team and I participated in the creation and, later on, maintenance of VNX which Strike 3 both owns and uses to identify the IP addresses used by individuals infringing Plaintiff's movies via the

BitTorrent protocol. Since 2021, I have also participated in the maintenance and evolution of VXN components under the role of Enterprise Architect.

42. It took the team approximately six months to develop VXN.

43. As explained below, VXN has several components and processes.

The Torrent Collector/Scraper

44. The first component of VXN is the Torrent Collector.

45. Torrent websites host .torrent files or list magnet links referring to .torrent files, which contain torrent metadata. In order to download content through BitTorrent, a user will first download a BitTorrent client (i.e., software that enables the BitTorrent protocol work), and then will search for and acquire .torrent files from torrent websites. The BitTorrent client reads the .torrent file's metadata, specifically its "Info Hash,"¹⁰ and uses that information to download pieces of the desired computer file that correlate to the .torrent file previously acquired.

46. The Torrent Collector is software that conducts lexical searches of Plaintiff's titles within well-known torrent websites.

47. The Torrent Collector is serviced at Amazon Elastic Compute Cloud ("Amazon EC2"). Amazon EC2 is a web service that provides secure, resizable compute capacity in the cloud.¹¹

The Downloader

48. The second component of VXN is a software called Downloader. After the Torrent Collector's lexical search yields a match (i.e., it has located a .torrent file which establishes that

¹⁰ The "Info Hash" is the data that the BitTorrent protocol uses to identify and locate the other pieces of the desired file across the BitTorrent network. To be clear, the "Info Hash" is not the hash value of the complete file nor its correlating .torrent file. Instead, it is a unique identifier contained in the metadata of the .torrent file that provides a "map" so that those pieces can be collected and re-assembled into a complete file (i.e., a playable movie) by a BitTorrent client.

¹¹ See <https://aws.amazon.com/ec2/>.

the correlating targeted computer file contains the title of one of Plaintiff's works), the Downloader subsequently downloads the .torrent file and a full copy of the targeted computer file from the whole BitTorrent swarm. To be clear, the Downloader does not obtain a full copy from a single infringer.

49. The targeted computer file is downloaded for human audiovisual verification purposes only. Indeed, downloading the entire targeted computer file is necessary so that Strike 3 can confirm that the targeted computer file, which is downloaded in pieces using the "Info Hash" value in the metadata of the related .torrent file, is in fact an infringing copy of a copyrighted work it owns.

50. It is impossible for the Downloader to re-distribute or upload any of the retrieved data, since, as written, the program does not contain such a function. To be clear, the downloader will never upload data to other computer systems in the BitTorrent network.

51. The Downloader then stores the .torrent file and a full copy of the targeted computer file directly onto a cloud platform account provided by Amazon Web Services ("AWS").

52. The Downloader is also serviced at Amazon EC2.

The Proprietary Client

53. The third component of VZN is a proprietary BitTorrent client ("Proprietary Client").

54. After the Downloader downloads the .torrent file and targeted computer file as described above, the Proprietary Client connects to peers within the swarm associated with that infringing computer file. The Proprietary Client connects to these peers using a TCP/IP connection. This connection cannot be spoofed.

55. Once the connection is established, the Proprietary Client begins the process of downloading a piece or multiple pieces of the infringing computer file from other computers

connected to the Internet through IP addresses, which are offering pieces of the infringing computer file for download (i.e., “peers” in the BitTorrent “swarm”). The Proprietary Client accomplishes this by using the Info Hash value in the metadata of the .torrent file, which has already been confirmed to correlate with a digital media file that infringes upon one of Strike 3’s copyrighted works. The BitTorrent protocol ensures that, because the Proprietary Client requests file pieces based on this specific Info Hash value, it only receives pieces of the related digital media file. In short, it repeatedly downloads data pieces from peers within the BitTorrent network which are distributing Plaintiff’s movies.

56. In this way, the Proprietary Client emulates the behavior of a standard BitTorrent client. However, there are two ways in which the Proprietary Client differs from a standard BitTorrent client. The first is that the Proprietary Client is incapable of distributing the infringing computer files. Thus, it is only able to download data from peers in a swarm and is unable to upload any data to the peers in a swarm. The second exception is that the Proprietary Client is disabled from storing any of the content obtained from the transaction and the Proprietary Client does not itself record evidence of infringement.

57. The Proprietary Client operates on an independent physical server which is located in a professional data center in Florida.

PCAP Recorder / Capture Card

58. The fourth component of VZN is the PCAP Recorder, which uses a physical PCAP Capture Card.

59. Data sent through the Internet is delivered in the form of “packets” of information. PCAP stands for “Packet Capture.” A PCAP is a computer file containing captured or recorded data transmitted between network devices.

60. In this case, Plaintiff sought to record numerous infringing BitTorrent computer transactions in the form of PCAPs. The PCAPs evidence particular IP addresses connecting to the Proprietary Client and sending pieces of a computer file (which contains an infringing copy of Plaintiff's works) to the Proprietary Client.

61. Strike 3's need to record and secure PCAPs is logical since PCAPs contain specific BitTorrent transaction details of evidentiary value.

62. Indeed, a PCAP contains the Internet Protocol (IP) Addresses used in the network transaction, the date and time of the network transaction, the port number¹² used to accomplish each network transaction, BitField value¹³, and the BitTorrent client used to accomplish the network transaction. All of the above can be useful in identifying an infringer.

63. A PCAP also identifies the Info Hash value that was used to obtain the transacted piece. This information identifies the data that was shared in the recorded transaction as a constituent part of a specific digital media file, which, as described above, has been confirmed to be a file that infringes upon one of Strike 3's copyrighted works.

64. In order to record the PCAPs in real-time for all BitTorrent transactions which the Proprietary Client is involved in, VZN uses a Capture Card called Link™ NT40A01 SmartNIC. This is a network capture card that was developed and manufactured by Napatech™.

65. Napatech is the leading provider of reconfigurable computing platforms.¹⁴ It develops and

¹² A port is a communication endpoint. Ports are identified for each protocol and address combination by the port number.

¹³ The “BitField” value is data exchanged during the handshake (and it also increases as the user continues to obtain more bits of the works) between the infringer and another peer. It informs the peer about the pieces available for download and therefore the total amount of the torrent file that the infringer has already downloaded and which the infringer is able to distribute to another peer upon request. This broadcasted value provides other peers with the percentage of the file which the infringer possesses. The “BitField” value is a value contained in every PCAP.

¹⁴ See <https://marketing.napatech.com/acton/attachment/14951/f-cce2aadf-5242-49dd-b515-31bd48077066/1/-/-/Fort%20Huachuca%20Press%20Release.pdf>.

markets the world's most advanced programmable network adapters for network traffic analysis and application off-loading. Napatech's "family of SmartNICs enables government and military personnel to capture all the data running through their networks[.]"¹⁵

66. Within VXN, the Capture Card is connected to the Proprietary Client's network connection via a passive network tap. A passive network tap allows the Capture Card to record perfect copies of all traffic without actively interacting with any other components within the network (i.e., the Proprietary Client). In this manner, the Capture Card retrieves an identical copy of each and every single network packet which is sent¹⁶ and received by the Proprietary Client.

67. The PCAP Recorder receives that data from the Capture Card and streams the PCAP files directly onto a cloud platform account provided by AWS. More specifically, the cloud platform is known as Amazon Simple Storage Service ("Amazon S3"). Within this Amazon S3 account, Plaintiff has enabled the object lock "legal hold" feature. This feature "prevents an object version from being overwritten or deleted [...] [which] remains in effect until removed."¹⁷ Thus, this ensures that the files cannot be modified or deleted.

68. Plaintiff's "legal hold" feature is currently set for three years. Therefore, the PCAPs cannot be modified or deleted for three years from the date and time the PCAP was first streamed onto the Amazon s3 cloud.

69. To be clear, no PCAP data is stored locally on the Capture Card. Rather, the PCAP data is streamed in real time and stored directly onto Amazon S3.

70. The Capture Card is synchronized with time servers that use the Global Positioning System

¹⁵ See <https://marketing.napatech.com/acton/attachment/14951/f-cce2aadf-5242-49dd-b515-31bd48077066/1/-/-/-/Fort%20Huachuca%20Press%20Release.pdf>.

¹⁶ The Proprietary Client does not send any data to BitTorrent peers. But even if it did, the Capture Card would record such transactions.

¹⁷ See <https://docs.aws.amazon.com/AmazonS3/latest/dev/object-lock-overview.html#object-lock-legal-holds>.

(GPS) as a clock source. This ensures that the dates and times within the PCAPs are accurate. Each recorded transaction is recorded in milliseconds (thousandths of a second).

71. The independent physical server housing the Capture Card and PCAP Recorder is also located at a professional data center in Florida.

The PCAP Stamper

72. The fifth component of VZN is the PCAP Stamper software.

73. Every 24 hours the PCAP Stamper¹⁸ sends an index of every PCAP file VZN has recorded within the last 24 hours to a 3rd party provider called DigiStamp, Inc.¹⁹ DigiStamp, Inc. then signs the index with a qualified timestamp. This ensures that the PCAPs existed on the date and time listed in the timestamp, and that it has not been modified as of the date and time listed in the timestamp.

74. The PCAP Stamper is located on Amazon EC2.

The PCAP Analyzer

75. The sixth component of VZN is the PCAP Analyzer. The PCAP Analyzer is software that: (a) retrieves stored PCAP files from Amazon S3; (b) extracts infringing transaction data from each PCAP; (c) verifies that each retrieved data piece is a part of the .torrent related file (and therefore distributing Plaintiff's copyrighted content) by using cryptographic hashes; and (d) organizes and

¹⁸ Though we termed this software the "PCAP Stamper," this term is not descriptive since it is DigiStamp, Inc. that actually signs the PCAP index with a qualified timestamp.

¹⁹ DigiStamp, Inc. provides "tools to prove the authenticity and integrity of electronic records. By the end of 2003, DigiStamp had created more than 1 million timestamps for customers. Not a single DigiStamp timestamp has ever been successfully challenged. In 2005, [DigiStamp] commissioned and completed an external audit so that [its] timestamp meets the highest standards of strong legal evidence for authenticating computer data." Further "state and federal agencies, as well as foreign governments, have sought [DigiStamp's] advice and our products. From the Supreme Court of Ohio to the Department of Defense to the federal governments of Mexico and Australia, [DigiStamp] [is] recognized as reliable experts who offer sound thinking as well as a fine product." See <https://www.digistamp.com/about-us/aboutus>.

summarizes the extracted infringing transaction data in a tabular format.

76. Each line item within the PCAP Analyzer's tabular output always references an existing PCAP file. In other words, there is a PCAP recording for every infringing transaction listed in the PCAP Analyzer's tabular output. Thus, Plaintiff is always able to provide the original recording (the PCAPs) for each transaction listed in the tabular output. The tabular format is merely a summary of the PCAP data and is created for better human readability.

77. The PCAP Analyzer is connected to Maxmind® GeoIP2 Precision Services geolocation database.²⁰

78. Maxmind is “an industry-leading provider of IP intelligence and online fraud detection tools.”²¹ “Over 5,000 companies use GeoIP data to locate their Internet visitors and show them relevant content and ads, perform analytics, enforce digital rights, and efficiently route Internet traffic.”²² Maxmind is not “software” or technology, but instead it is a database. Maxmind compiles information it receives from Internet Service Providers (ISPs) containing the city and state locations of the users of the ISPs and their respective IP addresses. Maxmind maintains and updates this list weekly and sells access to it.

79. The PCAP Analyzer uses the Maxmind database to determine both the Internet Service Provider that assigned a particular IP address, as well as the city and state that the IP Address traces to. The PCAP Analyzer adds this information to the tabular output.

80. For clarity, note that the PCAP Analyzer will analyze the captured data, only after it has been stored and locked in Amazon s3. Prior to this analysis, no human or computer system has any ‘knowledge’ of what transactions these PCAP files contain, or what IP addresses have been

²⁰ See <https://www.maxmind.com/en/geoip2-precision-services>.

²¹ See <https://www.maxmind.com/en/company>.

²² *Id.*

communicated with.

81. The PCAP Analyzer runs continuously in real-time.
82. The PCAP Analyzer software is located on Amazon EC2.
83. The PCAP Analyzer fulfills the same basic function as the well-known software called Wireshark and follows the same standards.

DECLARATION

PURSUANT TO 28 U.S.C. § 1746, I hereby declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed this 27th day of May, 2024.

By: _____


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JORGE ARCO